King Fahd University of Petroleum & Minerals
CIVIL & ENVIRONMENTAL ENGINEERING DEPARTMENT

CE 305: STRUCTURAL ANALYSIS I
Second Semester 2014-15 (141)
Sections – 01 & 02

Textbook: **Structural Analysis (8th edition) by R.C. Hibbeler**
Instructor: Dr. Abdulrahman Khathlan   **Office**: Bldg. 16-138
Office Hours: **UTR 10-11 am &   UT 12-1 pm + other times**
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COURSE OUTLINE & SCHEDULE

Date	Day	Lecture	Topic	Sections in Text
31 Aug.	U	1	Introduction	--------
2 Sep.	T	2	Structures and Equilibrium	2.1-2.2
4	R	3	Statically Determinate Structures	2.3-2.5
7	U	4	Shear & Moment Diagrams for Beams	4.1-4.2
9	T	5	Shear & Moment Diagrams for Beams	4.3
11	R	6	Shear & Moment Diagrams for Frames	4.4
14	U	7	Influence Lines	6.1-6.2
16	T	8	Influence Lines for Beams	6.3
18	R	9	Influence Lines for Beams	6.3
21	U	10	Influence Lines for Trusses	6.5
23	T	------	**National Day Holiday**	-----------
25	R	11	Influence Lines for Trusses	6.5
Hajj Break				
12 Oct.	U	12	Deflection of Beams	8.1-8.2
14	T	13	Work & Energy	9.1-9.3
16	R	14	Virtual Work for Trusses	9.4
19	U	15	Virtual Work for Beams	9.7
21	T	16	Virtual Work for Frames	9.7
23	R	17	Castigliano's Theorem for Trusses	9.5-9.6
26	U	18	Castigliano's Theorem - Beams & Frames	9.9
28	T	19	Statically Indeterminate Structures	10.1-10.2
30	R	20	Maxwell Theorem	10.3
2 Nov.	U	21	Force Method for Beams	10.4
4	T	22	Force Method for Beams	10.4
6	R	23	Force Method for Frames	10.5

Date	Day	Lecture	Topic	Sections in Text
9	U	24	Symmetric Structures & Qualitative Analysis	10.9
11	T	25	Slope-Deflection Equations	11.1
13	R	26	Slope-Deflection Method for Beams	11.2
16	U	27	Slope-Deflection Method for Beams	11.2
18	T	28	Slope-Deflection Method for Frames	11.3-11.4
20	R	29	Moment Distribution Method	12.1
23	U	30	Moment Distribution Method for Beams	12.2
25	T	31	Moment Distribution Method for Beams	12.3
27	R	32	Moment Distribution Method for Frames	12.4
30	U	33	Moment Distribution Method for Frames	12.4
2 Dec.	T	34	Comparison of Analytical Methods	Handout
4	R	35	Structural Analysis using the Computer	Handout
7	U	36	Structural Analysis using the Computer	Handout
9	T	37	Advanced Applications of Structural software	Handout
11	R	38	Advanced Applications of Structural software	Handout
14	U	39	Advanced Applications of Structural software	Handout
16	T	40	The Stiffness Method	15.1
18	R	41	The Stiffness Matrix for Beams	15.2-15.3
21	U	42	The Stiffness Method for Beams	15.4
23	T	43	The Stiffness Method for Frames	Notes
25	R	44	The Stiffness Method for Frames	Notes
28	U	45	Review	-----

Grade Distribution:

Attendance & Class	:	5 %
Homework & Quizzes	:	15 %
First Major Exam	:	25 %
Second Major Exam	:	25 %
Final Exam	:	30 %
		100%

Note: (1) The University regulations regarding excessive absences will be strictly adhered to in this course. See the Undergraduate Bulletin for details.

(2) All homework is to be submitted neatly with a cover page in due date. Late submission will not be accepted.

(3) All submitted homework must represent the students' own, and individual, effort. Plagiarism will not be tolerated, as per KFUPM policies.